

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 April 2006 (27.04.2006)

PCT

(10) International Publication Number
WO 2006/043745 A1

(51) International Patent Classification⁷: **C09K 11/79**

(74) Agent: **HAW, Yong-Noke**; 8th Fl. Songchon Bldg.,
642-15, Yoksam-dong, Kangnam-gu, Seoul 135-080 (KR).

(21) International Application Number:
PCT/KR2005/002369

(22) International Filing Date: 21 July 2005 (21.07.2005)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2004-0083188 18 October 2004 (18.10.2004) KR

(71) Applicant (for all designated States except US): **LG IN-
NOTEK CO., LTD** [KR/KR]; 14th FL, Hansol Bldg.,
736-1, Yoksam-dong, Kangnam-gu, Seoul 135-983 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Chang Hae**
[KR/KR]; 1402ho, 138dong, HanbitApt., Uoeun-dong,,
Yousung-gu, Daejun-si 305-755 (KR). **PARK, Joung
Kyu** [KR/KR]; 7ho, 305dong, Gongdonggwanni Apt.,
431bunji, Doryong-dong, Yousung-gu, Daejun-si 305-340
(KR). **KIM, Sang Kee** [KR/KR]; 307ho, 103dong, Chum-
danmoa Apt., 757-5, Wolgye-dong, Gwangsan-gu,
Gwangjoo-si 506-821 (KR). **KIM, Chung Ryeol**
[KR/KR]; 2007ho, 105dong, Yangsantown, Yongdu-dong,
Buk-gu, Gwangjoo-si 500-220 (KR). **CHOI, Kyoung
Jae** [KR/KR]; 884 Guemchun-ry, Shinpyung-myun, Dan-
gjin-gun, Chungnam-si 343-812 (KR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
YU, ZA, ZM, ZW

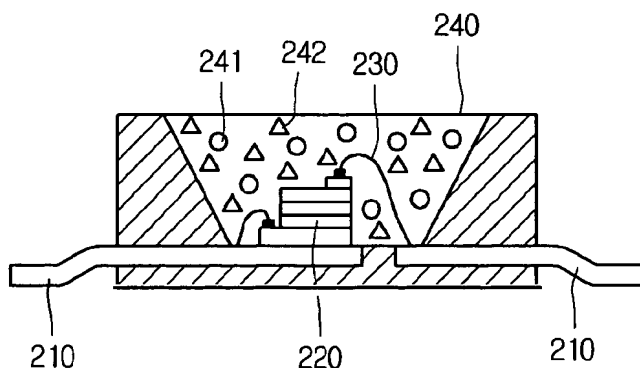
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PHOSPHOR AND LIGHT EMITTING DEVICE USING THE SAME



(57) Abstract: There are provided a phosphor and
a light emitting device using the same, wherein
in order to embody a desired wavelength of light, in a
state where a first phosphor and a second phosphor
are mixed in a light transmitting member, both of
light excited by an excitation light source and the
excitation light source are emitted to the outside
and embody a white light source. Further, the first
phosphor has a chemical formula of $\text{Sr}_{4-x}\text{Mg}_y\text{Ba}_z\text{Si}_2\text{O}_8:\text{EuX}^{2+}$ ($0 < x < 1$, $0 < y < 1$, $0 < z < 1$)
and the second phosphor has a chemical formula of $\text{Sr}_{3-x}\text{SiO}_5:\text{Eu} + x$ ($0 < x < 1$).

WO 2006/043745 A1